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Nova does not disclose "a label for electronics components" (this invention, claim 1), instead Nova discloses an electronic tag. Nova also does not disclose "a coded data symbol" (this invention, claim 1). Nova discloses a labelling technique where the information is stored electrically within the memory. The present invention is clearly distinct from the device of Nova as Nova does not disclose the essential elements of the present invention as defined by the amended claim 1.

Consequently the present invention as defined by the amended claim 1 is clearly not anticipated by Nova.

Hass (US Patent No. 6,036,101) relates to an electronic labelling system (Hass, title) which is designed for use in applications "such as inventory control, machinery maintenance records, or retail tagging" (Hass, col. 3 lines 29-31). The device "includes an integrated circuit (preferably including memory) and a battery" (Hass, col. 2 lines 25-26).

Like Nova, Hass does not disclose "a label for electronics components" (this invention, claim 1), instead Hass discloses an electronic label. Hass does not disclose "a coded data symbol" (this invention, claim 1) which is an essential feature of this invention as defined by claim 1. Instead, Hass stores data within the electronic memory which can be interrogated by means of the two electrical contacts (Hass, claim 1). This is distinct from the present invention in which the "coded data symbol" (this invention, claim 1) is read "by a vision system" (this application, page 5 line 25) which advantageous because it is a non contact method. The present invention is clearly distinct from the device of Hass as Hass does not disclose the essential elements of the present invention as defined by the amended claim 1.

Consequently the present invention as defined by the amended claim 1 is clearly not anticipated by Hass.

The two Moh patents (US Patent No. 6,165,594 and 6,214,250) both relate to a "temperature resistant, composite label" (Moh, both patents titles). The label of Moh is intended for use in the "steel making industries and cathode ray tube industries" (Moh 6,214,250, col. 1 lines 33-34).

Moh does not disclose "a label for electronics components" (this invention, claim 1); instead Moh discloses a large temperature resistant label. Moh does disclose use of "human readable alphanumeric characters, machine readable bar code characters, or combinations thereof" (Moh, 6,214,250 col. 3 lines 15-16). An alphanumeric character is not "a coded data symbol" (this invention, claim 1). A bar code is "a coded data symbol", however it is not "a two dimensional array of cells" which is an essential element of the present invention as defined by the amended claim 1.

"A two dimensional array of cells" (this invention, claim 1) provides considerable advantages over a one dimensional bar code. When reading a bar code, it is necessary to determine the relative widths of each individual line in order to decode the information within that bar code. However, with a two dimensional array of cells, the machine which is reading the code is detecting a pattern rather than the exact sizes of each of the cells. This provides for a larger degree of self-error correction within the machine vision system compared to bar code reading. Additionally, this provides a larger opportunity for miniaturization, because a machine vision system can detect a pattern more easily than the width of a line and this ultimately provides a limit to the minimum readable size of a bar code.

Consequently the present invention as defined by the amended claim 1 is not anticipated by either of the Moh patents.

As neither Hass nor Nova teach "a coded data symbol" (this invention, claim 1), it is not possible to combine the teachings of Moh with that of Hass and/or Nova to arrive at the present invention. None of the prior art documents disclose a "coded data symbol" which "comprises a two dimensional array of cells" which is an essential element of the present invention as defined by the amended claim 1.

Consequently the present invention as defined by the amended claim 1 is clearly both novel and not obvious and the applicant respectfully submits that the Examiner's rejection under 35 U.S.C § 102 cannot be sustained.

The Examiner also rejects claims 2-16 under 35 U.S.C. § 102 as being anticipated by Nova, Hass and the Moh patents. Claim 16 had been amended as above to correct an error. As claims 2-16 are dependent on the amended claim 1, which is deemed allowable, the applicant respectfully submits that the rejection of claims 2-16 under 35 U.S.C. § 102 cannot be sustained.

The Examiner also rejects claim 17 under 35 U.S.C. § 102 as being anticipated by Nova, Hass and the Moh patents. Claim 17 has therefore been amended as above. Basis for this amendment can be found on page 4 of this application, lines 24-32, and in figures 1 and 2. Claim 17 relates to "a method of labelling electronics components" which uses a "coded data symbol" comprising "a two dimensional array of cells" (this invention, claim 17) and this is

clearly distinct from the prior art for the reasons discussed above in relation to claim 1. The applicant, therefore, respectfully submits that the rejection of claim 17 under 35 U.S.C. § 102 cannot be sustained.

The Examiner rejects claim 18 under 35 U.S.C. § 102 as being anticipated by Nova, Hass and the Moh patents. Claim 18 has therefore been amended as above. Basis for this amendment can be found on page 4 of this application, lines 24-32, and in figures 1 and 2.

Claim 18 relates to "a vision system for reading a coded data symbol on an electronics component label" (this invention, claim 18). The devices of Nova and Hass are electronic devices which contain electronic memories (Nova col. 4 lines 33-37 and Hass claim 1). These devices cannot therefore be read by a vision system and instead require electrical circuits via contacts on the devices in order to read the information which is stored in the memories (Nova claim 4 and Hass claim 1). Nova does disclose use of "an optical bar code" which can be "read by a laser" (Nova, col. 38 lines 44-45). However, a bar code is a one dimensional code and is therefore clearly distinct from "a vision system for reading a coded data symbol on an electronics component label, wherein the coded data symbol comprises a two dimensional array of cells" including "means for detecting a two dimensional pattern of light reflected from the symbol" (this invention, claim 18).

Consequently the present invention as defined by the amended claim 18 is not anticipated by either Nova or Hass.

In the two Moh patents, Moh discloses a label which is "human and/or machine readable using optical techniques. Representative examples of such optical techniques include

viewing and/or scanning using infrared (IR) light, visible light, ultraviolet (UV) light, or the like." (Moh, 6,214,250 col. 7 lines 22-27). However, Moh does not disclose a system for reading "a two dimensional array of cells" including "means for detecting a two dimensional pattern of light reflected from the symbol" which is an essential element of the present invention as defined by the amended claim 18. The advantages of a system which reads a two dimensional pattern compared to a one dimensional code have already been discussed in relation to claim 1.

Consequently the present invention as defined by the amended claim 18 is not anticipated by either of the Moh patents.

As none of Nova, Hass or Moh disclose a "means for detecting a two dimensional pattern of light reflected from the symbol" (this invention, claim 18), a skilled person could not combine the teachings of Nova, Hass and Moh in any combination to arrive at the present invention.

Consequently the present invention as defined by claim 18 is clearly both not anticipated and not obvious and the applicant respectfully submits that claim 18 be allowed.

The Examiner also rejects claim 19 under 35 U.S.C. § 102 as being anticipated by Nova, Hass and the Moh patents. As claim 19 is dependent on the amended claim 18, which is deemed allowable, the applicant respectfully submits that the rejection of claim 19 under 35 U.S.C. § 102 cannot be sustained.

The Examiner also rejects claim 20 under 35 U.S.C. § 102 as being anticipated by Nova, Hass and the Moh patents. Claim 20 has therefore been amended as above. Basis for this

amendment can be found on page 4 of this application, lines 24-32, and in figures 1 and 2. Claim 20 relates to "an electronics component labelling system comprising a label carrying a coded identifier symbol" "wherein the coded identifier symbol comprises a two dimensional array of cells" (this invention, claim 20) and this is clearly distinct from the prior art for the reasons discussed above in relation to claim 1. The applicant, therefore, respectfully submits that the rejection of claim 20 under 35 U.S.C. § 102 cannot be sustained.

The Examiner also rejects claim 21 under 35 U.S.C. § 102 as being anticipated by Nova, Hass and the Moh patents. Claim 21 has therefore been amended as above. Basis for this amendment can be found on page 4 of this application, lines 24-32, and in figures 1 and 2. Claim 21 relates to "an electronics component or component carrier having a label attached thereto, which label comprises" "a coded data symbol" " wherein the coded data symbol comprises a two dimensional array of cells" (this invention, claim 21) and this is clearly distinct from the prior art for the reasons discussed above in relation to claim 1. The applicant, therefore, respectfully submits that the rejection of claim 21 under 35 U.S.C. § 102 cannot be sustained.

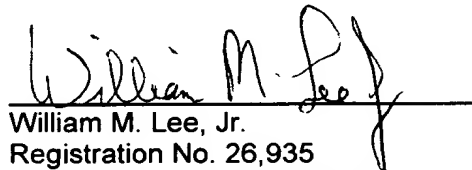
The Examiner also rejects claim 22 under 35 U.S.C. § 102 as being anticipated by Nova, Hass and the Moh patents. Claim 22 has therefore been amended as above. Basis for this amendment can be found on page 4 of this application, lines 24-32, and in figures 1 and 2. Claim 22 relates to "a method of producing a label for electronics components, comprising" "etching a coded data symbol" "wherein the coded data symbol comprises a two dimensional array of cells" (this invention, claim 22) and this is clearly distinct from the prior art for the reasons discussed above in relation to claim 1. The applicant, therefore, respectfully submits that the rejection of claim 22 under 35 U.S.C. § 102 cannot be sustained.

The Examiner finally rejects claim 23 under 35 U.S.C. § 102 as being anticipated by Nova, Hass and the Moh patents. As claim 23 is dependent on the amended claim 22, which is deemed allowable, the applicant respectfully submits that the rejection of claim 23 under 35 U.S.C. § 102 cannot be sustained.

As all the points raised by the Examiner have now been dealt with, favorable reconsideration of all the claims is respectfully requested.

May 22, 2002

Respectfully submitted,

A handwritten signature in black ink, appearing to read "William M. Lee, Jr.", is written over a horizontal line.

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Version With Markings To Show Changes Made

1. (Amended) A label for electronics components comprising a substrate and a coded data symbol carried by the substrate, wherein the coded data symbol comprises a two dimensional array of cells and wherein the format of the symbol is such as to facilitate accommodation of the substrate on components or carriers for the components.
16. (Amended) A label according to claim 1 wherein the substrate is a component or component carrier substrate.
17. (Amended) A method of labelling electronics components comprising attaching to the components or carriers for the components a substrate carrying a coded data symbol, wherein the coded data symbol comprises a two dimensional array of cells.
18. (Amended) A vision system for reading a coded data symbol on an electronics component label, wherein the coded data symbol comprises a two dimensional array of cells, comprising means for producing light for illuminating the symbol and means for detecting [the] a two dimensional pattern of light reflected from the symbol.
20. (Amended) An electronics component labelling system comprising a label carrying a coded identifier symbol for attachment to a component or component carrier, wherein the coded identifier symbol comprises a two dimensional array of cells, a vision system for reading and decoding the label and data storage means for storing at a location identifiable according to the decoded identifier data relevant to the component.

21. (Amended) An electronics component or component carrier having a label attached thereto, which label comprises a substrate and a coded data symbol carried by the substrate, wherein the coded data symbol comprises a two dimensional array of cells and wherein the format of the symbol is such as to facilitate accommodation of the substrate on the components or carrier.

22. (Amended) A method of producing a label for electronics components, comprising providing a substrate, providing an etchable layer on the substrate and etching a coded data symbol into the etchable layer, wherein the coded data symbol comprises a two dimensional array of cells.